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UNITED STATES DISTRICT COURT

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NORTHERN DISTRICT OF CALIFORNIA

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SAN JOSE DIVISION

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Case No: C:07-05152 JW

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IN RE APPLE & AT&T ANTITTRUST LITIGATION

**DECLARATION OF
JOSEPH CARUSO**

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I, **JOSEPH CARUSO**, hereby declare:

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1.   I am currently employed by Global Digital Forensics, Inc., a Computer

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Forensics and Electronic Discovery consulting firm. I make this Declaration in Support of

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the Motion to appoint Max Folkenflik as lead counsel in this case. Based on my work with

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Mr. Folkenflik in this case and other matters, I consider him to be highly qualified to act as

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lead counsel because of his understanding of the critical computer programming issues

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which are at the heart of this case.

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My Background and Experience

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2.   I have over 20 years experience in the development and analysis of large

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scale Mainframe business applications used in a variety of industries including healthcare,

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investment brokerage, insurance, government, manufacturing and retail.

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3.   I have strong analytical, programming, and investigative skills in addition to the experience necessary to professionally analyze and determine system capabilities as they relate to the business process. I also have specialized knowledge and experience in the storage, retrieval and analysis of large scale data storage systems with a focus on real-time transaction systems.

4.   I have been involved with the design and analysis of large real-time systems including reservation and scheduling, traffic analysis, financial transactions, accounting and logistics systems.

5.   I currently instruct federal, state and local law enforcement, as well as corporate security personnel, in digital forensics and investigations, and conduct computer forensic investigations of systems ranging from stand-alone computers to complex server and mainframe systems. I have been retained by, among others, the Federal Bureau of Investigation and the National Aeronautics and Space Administration to instruct them in computer forensic techniques.

6.   I have been involved in the analysis of massive data and processing systems of credit card issuers, insurance companies and other financial institutions, I am currently and have often been engaged by Fortune 100 and Fortune 500 companies.

7.   I have a wide range of experience and understanding of programming codes and systems, including COBOL, COBOL II, DB2, CICS, VSAM, TSO/ISPF, ROSCOE, MICRO FOCUS, Basic, Fortran, SQL, Pascal, C (all flavors), Assembler, ISPF, PL1 IMS/TSO/CLISTS/JCL/ JCL-Jes2/3,IMS, MVS, ACF2 Mainframe Security DFHSM, SPUFI,BMC LoadPlus, ACF2 Rumba, EDA, CLISTS FOCUS, TSO/MVS/ Focus, Oracle, ACF2 Security, CA-Spool, Boole & Babbage, Endeavor, BMC Computer Associates Tools, Compuware FILEAID, SAS, CHAMP, PANVALET - Tools VMSECURE, VM-CYPHER, MFD/MFS Full Screen Display, SAS, PeopleSoft, and others on mainframe and I386 based servers and their respective operating systems and hardware.

My Work on this Case

8.   I and the computer specialists under my direction acquired hardware,

specifically 4 Apple iPhones from both AT&T stores and Apple Stores. Two of the iPhones were activated through AT&T, and two were activated using iPhone activation software.

9.   We proceeded to test the iPhones as they came from the box while we did extensive research of both mainstream and underground information relating to the iPhone and its underlying operating system.

10.   The iPhones were unlocked and downgraded between different software versions and all memory included was dumped for analysis.

11.   A comparison of the differences in the versions was done to analyze the differences in the iPhone software before and after bricking, as well as what occurred during the bricking process to identify specific code that affects bricking between the different versions.

12.   We obtained a fresh iPhone from another AT&T store and ran self-activation routines to change the computer's name service resolution so it redirected the iTunes Server activation request to the local computer. This activated the phone in a way that it could be used normally in all ways, like playing music or surfing the Internet using WiFi, - the only difference was it could not connect to a wireless carrier to make phone calls or use wireless broadband. Basically we created the iPod Touch with a radio that did not work. This process was used to determine if the baseband software affected other functionality, such as playing music, videos or surfing the net.

13.   The software(s) that were dumped and disassembled using reverse engineering tools convert binary executables to assembly code which is human readable. We used the disassembled code to attempt to determine whether the code is intentional, necessary, or accidental. During this analysis, we discovered brick mode, which we believe is the software routine used by Apple to cause the iPhone to lock up and become unusable by the consumer if attempts to unlock it for use on networks other than AT&T are made.

14.   The specialists I chose and supervised to analyze the iPhones embody skills ranging from electrical engineering and embedded development to software programming

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for embedded systems and Apple OS/X (the operating system running on the iPhone). These engineers are capable of engineering a product like the iPhone from its individual components up through the programming required to make it functional and have an exceptional understanding of the technology and have engineered similar devices.

My Experience with, and Opinion of, Mr. Folkenflik

15.   Over the last twenty years, I have worked as a technology consultant and expert with hundreds of attorneys ranging from large international firms to small boutique technology firms alike.

16.   I have worked with Mr. Folkenflik since 2003 on the matter of *Hoffman, et al. v. American Express, et al.,* Case No. 2001-022881 (the "AMEX case"). That case involves a deep understanding of American Express's computer programs and analysis of substantial amounts of computer data, as well as concepts of scale that even most computer experts have little understanding of.

17.   During the AMEX case, Mr. Folkenflik was able to grasp complex computer concepts, including storage and encryption issues, as well as the complex evolution of what is arguably one of the most complex financial billing and tracing systems in the world. In fact, Mr. Folkenflik not only grasped the concepts, but he was able to interpret the logic behind the concepts and communicate them intelligently to my team of computer specialists.

18.   I was often able to talk to Mr. Folkenflik as if he were another engineer, and when he occasionally did not understand a process or concept, his questions always came from what seemed like a foundation of understanding, beyond that of any attorney I have worked with in the past.

19.   In my opinion, Mr. Folkenflik is one of the people technologists say "get it." He has always shown an interest in the technology we discussed and, more than that, understands it and is able to communicate it to others clearly, concisely and accurately.

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I can say without hesitation that Mr. Folkenflik is one of the most technically-astute

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attorneys I have worked with.

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    I declare under penalty of perjury that the foregoing is true and correct.

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Dated: February 29, 2008

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JOSEPH CARUSO

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